

Patent Claims

1. Device for the fastening of façade plates (2) with a threaded bar (4) extending from a holding element (3),

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wherein, on its first end (E1) located near the threaded bar (4), the holding element (3) has an annular space (6) with a wall made of an elastic material (10),

10 wherein a channel (7) extends from the annular space (6) to a second end (E2) at a distance from the threaded bar (4),

and wherein a valve (8) is provided on the second end (E2) with which valve the channel (7) can be closed.

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2. Device as defined in claim 1, wherein the holding element (3) has a larger diameter on the second end (E2) than on the first end (E1).

20 3. Device as defined in one of the preceding claims, wherein the holding element (3) tapers conically from the second end (E2) to the first end (E1).

4. Device as defined in one of the preceding claims, 25 wherein the holding element (3) is one-piece and made of plastic.

5. Device as defined in one of the preceding claims, wherein the annular space (6) has a radially surrounding re- 30 cess on the first end (E1).

6. Device as defined in one of the preceding claims, wherein an elastic tube (10) is located on the holding element (3).

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7. Device as defined in one of the preceding claims,
wherein the elastic tube (10), preferably made of silicon,
forms the wall of the annular space (6).

5 8. Device as defined in one of the preceding claims,
wherein the elastic tube (10) extends essentially over the
entire axial length of the holding element (3).

9. Device as defined in one of the preceding claims,
10 wherein the elastic tube (10) is fastened on a flange (9) lo-
cated on the first end (E1) of the holding element (3) via a
mounting element (11), preferably a tube binder.

10. Device as defined in one of the preceding claims,
15 wherein an undercut projection (15) is provided on the second
end (E2).

11. Device as defined in one of the preceding claims,
wherein a central recess is provided on the second end
20 (E2).

12. Method of fastening façade plates (2) using the device
as defined in one of the preceding claims, with the following
steps:

25 a) Make a bored hold (12, 5) extending into a supporting
wall and reaching through the façade plate (2).

b) Widen the radius of the reach-through bored hole (12)
30 reaching through the façade plate (2) in the vicinity of a
visible side of the façade plate (2),

c) Install a dowel (13) in the bored hole (5) made in the
supporting wall (2) using a hardenable mass (14),

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d) Insert the threaded bar (4) into the dowel (13) so that the holding element (3) lies on the inner circumference of the reach-through bored hole (12),

5 e) Screw in the device and mount to the façade plate (2),

f) Inject a viscoplastic hardenable mass (16) via the valve (8) so that the wall (10) surrounding the annular space (6) is widened and the holding element (3) is thereby held in the
10 reach-through bored hole (12).

13. Method as defined in claim 12, wherein the radius of the reach-through bored hole (12) is conically widened.

15 14. Method as defined in one of the claims 12 or 13, wherein an epoxy resin is used as the viscoplastic hardenable mass (16).

20 15. Method as defined in one of the claims 12 to 14, wherein an opening of the reach-through bored hole (12) remaining on the visible side of the façade plate (2) is closed after the hardening of the viscoplastic hardenable mass (16).

25 16. Method as defined in one of the claims 12 to 15, wherein the opening is closed with a cover or a mass (17) containing a binding agent.